Circulation of the North Adriatic Sea during Winter 2002-03

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Wintertime circulation in the North Adriatic Sea is largely driven by strong, cold, dry winds (Bora) lasting for a few days but recurring throughout the winter months. Each such event provides locally strong surface stresses (tenths of a N/m^2) and heat loss to the atmosphere (hundreds of W/m^2), leading to both wind and density-driven circulation. Our own measurements indicate the former predominates. The conclusion is based however on a single ADCP deployed during a winter (2000-01) that was characterized by generally weak Bora. The instrument, deployed off the Italian coast just north of Ancona, shows variations in the alongshore current that are strongly correlated with wind stress elsewhere, most notably with that at the mouth of Kvarner Bay. This presentation will give a preliminary report from an array of some dozen recently recovered ADCPS, which should resolve the overall circulation and its dependence on Bora forcing. The data is part of a large international observing effort made during winter 2002-03.